

ABSTRACT OF THE DISCLOSURE

A low-water cut-off system [A] determines if fluid [W] within a boiler or other enclosure drops below a predetermined level within the enclosure. A signal generator introduces a signal into the enclosure so that the signal is present for sensing at the predetermined level, where a probe is provided for sensing the signal if present as occurs if the water is at the predetermined level. A control, which includes a microcontroller, is responsive to the probe for providing a control function in response to whether the signal is so sensed by the probe, and so to determine if water has dropped below the predetermined level. The function may be causing alarm signalling or boiler heating cut-off. Self-test and time delay features are also included. Provision is made so that the control compensates for variation in electrical conductivity of the water through which the probe signal is sent, including circuitry to adjust for a wide range of possible purity levels.

Provision is included such that the low water cut-off system is fault tolerant no matter at what water purity it is adjusted to operate.